

PATENT
Customer No. 22,852
Attorney Docket No. 01413.0010-00000

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Claims 1-13 (canceled).

Claim 14 (currently amended): A method of visualizing ~~sequence data of~~
comparison results for at least one of a plurality of biopolymer materials represented in
a set of sequences ~~data~~, the method comprising:

comparing ~~a sequence data~~ of each biopolymer material to ~~a sequence data~~ of
each other biopolymer material to provide respective comparison results;

arranging the comparison results in a square matrix indexed by the plurality of
biopolymer materials;

creating a high-dimensional context vector for at least one of the biopolymer
materials based on a row or column of the square matrix; and

projecting the context vector onto a two- or three-dimensional viewing area;

thereby visualizing ~~sequence data~~ comparison results for at least one of a
plurality of biopolymer materials represented in the set of sequences ~~data~~.

Claim 15 (previously presented): The method according to claim 14, wherein
from each row or column of the square matrix, a respective high-dimensional context

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vector is created for each of the biopolymer materials based on the comparison results in the row or column.

Claim 16 (previously presented): The method according to claim 14, wherein the comparing uses a Basic Local Alignment Search Tool.

Claim 17 (previously presented): The method according to claim 14, wherein the comparing provides comparison results based on an expectation of a relation.

Claim 18 (previously presented): The method according to claim 14, wherein the biopolymer material is protein.

Claim 19 (previously presented): The method according to claim 14, wherein the biopolymer material is nucleic acid.

Claim 20 (currently amended): An apparatus for visualizing ~~sequence data~~ comparison results for at least one of a plurality of biopolymer materials represented in a set of ~~sequences data~~, the apparatus comprising:

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at least one memory having program instructions,
at least one computer output device for visualizing sequence data comparison results, and
at least one processor configured to execute the program instructions to perform the operations of:
comparing a sequence data of each biopolymer material to a sequence data of each other biopolymer material to provide respective comparison results;
arranging the comparison results in a square matrix indexed by the plurality of biopolymer materials;
creating a high-dimensional context vector for at least one of the biopolymer materials based on a row or column of the square matrix; and
projecting the context vector onto a two- or three-dimensional viewing area,
wherein the apparatus enables visualization of the sequence data of comparison results for the respective biopolymer material.

Claim 21 (currently amended): An apparatus for visualizing sequence data comparison results for at least one of a plurality of biopolymer materials represented in a set of sequences data, the apparatus comprising:

means for comparing a sequence data of each biopolymer material to a sequence of each other biopolymer material to provide respective comparison results;
means for arranging the comparison results in a square matrix indexed by the plurality of biopolymer material;

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means for creating a high-dimensional context vector for at least one of the biopolymer materials based on a row or column of the square matrix; and
means for projecting the context vector onto a two- or three-dimensional viewing area,
wherein the apparatus enables visualization of the ~~sequence data of~~ comparison results for the respective biopolymer material.

Claim 22 (currently amended): A computer-readable medium containing instructions for controlling a computer system to perform a method for visualizing ~~sequence data~~ comparison results for at least one of a plurality of biopolymer materials represented in a set of ~~sequences data~~, the method comprising:

comparing ~~a sequence data of~~ each biopolymer material to ~~a sequence data of~~ each other biopolymer material to provide respective comparison results;

arranging the comparison results in a square matrix indexed by the plurality of biopolymer materials;

creating a high-dimensional context vector for at least one of the biopolymer materials based on a row or column of the square matrix; and

projecting the context vector onto a two- or three-dimensional viewing area,

wherein the method enables visualization of the ~~sequence data of~~ comparison results for the respective biopolymer material.

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Claim 23 (previously presented): The method of claim 14, wherein the context vector is utilized for comparison of the biopolymer materials using cluster analysis.

Claim 24 (previously presented): The method of claim 14, wherein the context vector comprises a row or column of an object attribute matrix of comparison results.